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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,351	11/19/2003	Janet B. Davis	7784-000154DVA	8640

27572 7590 11/04/2004

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EXAMINER

PIZIALI, ANDREW T

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,351

Applicant(s)

DAVIS ET AL.

Examiner

Andrew T Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,11-16 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8,11-16 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informality: This application has been filed as a division of Application No. 09/883,760, filed 6/18/2001, but this application discloses subject matter not disclosed in the parent application. For example, the specification discloses that the precipitated monazite or xenotime exhibits a pronounced needle-like morphology (see [0015]). The specification also discloses that this microstructure is advantageous for washing the precipitate to remove impurities and excess phosphate and/or phosphorous (see [0015]). A later application for a distinct or independent invention, carved out of a pending application and disclosing and claiming only subject matter disclosed in an earlier or parent application is known as a divisional application or "division." In this case, it appears that continuation-in-part is the correct designation. A continuation-in-part is an application filed during the lifetime of an earlier nonprovisional application, repeating some substantial portion or all of the earlier nonprovisional application and adding matter not disclosed in the said earlier nonprovisional application (see MPEP 201.08).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 15-16 and 19-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claim 15 contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventors, at the time the application was filed, had possession of the claimed invention. In the Background of the Invention, the specification discloses that insulating blankets are preferably removable [0006], but the specification does not teach or suggest that the claimed insulating blanket is capable of being removably adhered.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8 and 12-14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USPN 5,665,463 to Morgan et al. (hereinafter referred to as Morgan).

Regarding claims 8 and 12-14, Morgan discloses an insulating blanket having high temperature stability comprising a ceramic fabric including ceramic fibers and a coating on the fibers comprising one of a monazite powder and a xenotime powder and having a stoichiometric ratio between a metal of the powder and a phosphate of the powder of about 1:1 (see entire

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document including column 1, lines 18-21, column 2, line 35 through column 3, line 4, column 4, lines 12-35, and column 7, line 63 through column 9, line 34).

Regarding the claimed process of washing the monazite or xenotime powder such that the powder is essentially free of impurities and excess phosphorous, Morgan does not specifically mention washing the powder but it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Regarding excess phosphorous, Morgan specifically discloses that excess phosphorous may be removed by adding a suitable buffer material (column 9, lines 10-25). Regarding impurities, Morgan does not teach or suggest the presence of impurities.

Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show obvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Regarding claims 12-13, Morgan discloses that the coating may comprise an inert powder such as Al_2O_3 , zirconia, YAG, and/or mullite (column 3, lines 36-58).

Regarding claim 14, Morgan discloses that the metal may comprise lanthanum, cerium, and/or yttrium (column 3, lines 36-64).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,665,463 to Morgan as applied to claims 8 and 12-14 above, and further in view of USPN 4,732,878 to Everitt et al. (hereinafter referred to as Everitt).

Morgan discloses that the fibers may be ceramic (column 4, lines 12-35), but does not mention the use of ceramic fibers with a SiC additive. Everitt discloses that it is known in the art to use ceramic fibers with a SiC additive to increase emissivity and to improve the retention of carbon in an oxidative atmosphere, which improves physical properties (column 6, line 12 through column 7, line 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a SiC additive, as taught by Everitt, because the SiC additive increases emissivity and improves the retention of carbon in an oxidative atmosphere, which improves physical properties.

9. Claims 15-16 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,665,463 to Morgan as applied to claims 8 and 12-14 above, and further in view of Applicant's Disclosure.

Regarding claims 15-16 and 20-22, Morgan discloses that the insulating blanket may be used as a thermal protection blanket (column 4, lines 12-35), but does not specifically mention adhering the blanket to a body. Morgan is silent with regards to specific bodies, therefore, it would have been necessary and thus obvious to look to the prior art for conventional bodies requiring a thermal protection blanket. The current applicant provides this conventional teaching showing that it is known in the art to adhere a thermal protection blanket to a reentry vehicle, such as the Space Shuttle (see [0003] and [0004]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adhere the thermal protection blanket of Morgan to a reentry vehicle, such as the Space Shuttle, motivated by the expectation of successfully practicing the invention of Morgan.

Morgan does not specifically mention the ability of the blanket to be removed once adhered, but considering the substantially identical blanket taught by the prior art, compared to the currently claimed blanket, it appears that the blanket taught by the prior art is inherently capable of being removed once adhered.

The Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly

or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

Regarding claims 20-21, Morgan discloses that the coating may comprise an inert powder such as Al_2O_3 , zirconia, YAG, and/or mullite (column 3, lines 36-58).

Regarding claim 22, Morgan discloses that the metal may comprise lanthanum, cerium, and/or yttrium (column 3, lines 36-64).

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,665,463 to Morgan in view of Applicant's Disclosure as applied to claims 15-16 and 20-22 above, and further in view of USPN 4,732,878 to Everitt.

Morgan discloses that the fibers may be ceramic (column 4, lines 12-35), but does not mention the use of ceramic fibers with a SiC additive. Everitt discloses that it is known in the art to use ceramic fibers with a SiC additive to increase emissivity and to improve the retention of carbon in an oxidative atmosphere, which improves physical properties (column 6, line 12 through column 7, line 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a SiC additive, as taught by Everitt, because the SiC additive increases emissivity and improves the retention of carbon in an oxidative atmosphere, which improves physical properties.

11. Claims 8 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,665,463 to Morgan in view of USPN 6,420,269 to Matsuzawa et al. (hereinafter referred to as Matsuzawa).

Regarding claims 8 and 12-14, Morgan discloses an insulating blanket having high temperature stability comprising a ceramic fabric including ceramic fibers and a coating on the fibers comprising one of a monazite powder and a xenotime powder and having a stoichiometric ratio between a metal of the powder and a phosphate of the powder of about 1:1 (see entire document including column 1, lines 18-21, column 2, line 35 through column 3, line 4, column 4, lines 12-35, and column 7, line 63 through column 9, line 34).

Regarding the claimed process of washing the monazite or xenotime powder (precipitate) such that the powder is essentially free of impurities and excess phosphorous, Morgan does not specifically mention washing the powder, but Morgan does disclose that the blanket is preferably free of excess phosphorous (paragraph bridging columns 8 and 9) and that the fibrous material may be impregnated with a precursor (e.g., a solution, slurry, or sol-gel) that converts to a monazite or xenotime when heated (column 8, lines 7-35). Matsuzawa discloses that it is known in the water-insoluble precipitate art to wash a precipitate to remove impurities (column 6, lines 7-9 and 65-68, and column 7, lines 29-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to wash the monazite or xenotime precipitate, as taught by Matsuzawa, because the washing process would remove unwanted impurities and excess phosphorous.

Regarding claims 12-13, Morgan discloses that the coating may comprise an inert powder such as Al_2O_3 , zirconia, YAG, and/or mullite (column 3, lines 36-58).

Regarding claim 14, Morgan discloses that the metal may comprise lanthanum, cerium, and/or yttrium (column 3, lines 36-64).

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,665,463 to Morgan in view of USPN 6,420,269 to Matsuzawa as applied to claims 8 and 12-14 above, and further in view of USPN 4,732,878 to Everitt.

Morgan discloses that the fibers may be ceramic (column 4, lines 12-35), but does not mention the use of ceramic fibers with a SiC additive. Everitt discloses that it is known in the art to use ceramic fibers with a SiC additive to increase emissivity and to improve the retention of carbon in an oxidative atmosphere, which improves physical properties (column 6, line 12 through column 7, line 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a SiC additive, as taught by Everitt, because the SiC additive increases emissivity and improves the retention of carbon in an oxidative atmosphere, which improves physical properties.

13. Claims 15-16 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,665,463 to Morgan in view of USPN 6,420,269 to Matsuzawa as applied to claims 8 and 12-14 above, and further in view of Applicant's Disclosure.

Regarding claims 15-16 and 20-22, Morgan discloses that the insulating blanket may be used as a thermal protection blanket (column 4, lines 12-35), but does not specifically mention adhering the blanket to a body. Morgan is silent with regards to specific bodies, therefore, it would have been necessary and thus obvious to look to the prior art for conventional bodies requiring a thermal protection blanket. The current applicant provides this conventional teaching showing that it is known in the art to adhere a thermal protection blanket to a reentry vehicle, such as the Space Shuttle (see [0003] and [0004]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adhere the thermal

protection blanket of Morgan to a reentry vehicle, such as the Space Shuttle, motivated by the expectation of successfully practicing the invention of Morgan.

Morgan does not specifically mention the ability of the blanket to be removed once adhered, but considering the substantially identical blanket taught by the prior art, compared to the currently claimed blanket, it appears that the blanket taught by the prior art is inherently capable of being removed once adhered.

Regarding claims 20-21, Morgan discloses that the coating may comprise an inert powder such as Al_2O_3 , zirconia, YAG, and/or mullite (column 3, lines 36-58).

Regarding claim 22, Morgan discloses that the metal may comprise lanthanum, cerium, and/or yttrium (column 3, lines 36-64).

14. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,665,463 to Morgan in view of USPN 6,420,269 to Matsuzawa in view of Applicant's Disclosure as applied to claims 15-16 and 20-22 above, and further in view of USPN 4,732,878 to Everitt.

Morgan discloses that the fibers may be ceramic (column 4, lines 12-35), but does not mention the use of ceramic fibers with a SiC additive. Everitt discloses that it is known in the art to use ceramic fibers with a SiC additive to increase emissivity and to improve the retention of carbon in an oxidative atmosphere, which improves physical properties (column 6, line 12 through column 7, line 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a SiC additive, as taught by Everitt, because the SiC additive increases emissivity and improves the retention of carbon in an oxidative atmosphere, which improves physical properties.

Response to Arguments

15. Applicant's arguments filed 10/4/2004 have been fully considered but they are not persuasive.

Regarding the objection to the specification, the applicant asserts that no new matter has been added in the present specification. The examiner respectfully disagrees. For example, the specification discloses that the precipitated monazite or xenotime exhibits a pronounced needle-like morphology (see [0015]). The specification also discloses that this microstructure is advantageous for washing the precipitate to remove impurities and excess phosphate and/or phosphorous (see [0015]).

The applicant asserts that in light of the amendments to the claims, the claims are distinguishable over the applied prior art. The examiner respectfully disagrees. Although Morgan does not specifically mention washing the powder, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Regarding excess phosphorous, Morgan specifically discloses that excess phosphorous may be removed by adding a suitable buffer material (column 9, lines 10-25). Regarding impurities, Morgan does not teach or suggest the presence of impurities.

Conclusion

16. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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